

Name Key

Date \_\_\_\_\_

## 201 Chapter 1 Review

*Round to nearest tenth.*Find the **perimeter** of  $\triangle ABC$ . ~~Leave the answer in reduced radical form.~~

1.  $A(0,6), B(-6,-2), C(8,-4)$

$$AB = \sqrt{6^2 + 8^2} = 10$$

$$BC = \sqrt{(-14)^2 + 2^2} = \sqrt{200} = 10\sqrt{2}$$

$$AC = \sqrt{8^2 + (-10)^2} = \sqrt{164} = 2\sqrt{41}$$

$$P = 10 + 10\sqrt{2} + 2\sqrt{41} \approx 36.9$$

2.  $A(1,3), B(6,-2), C(1,-2)$

$$AB = \sqrt{5^2 + (-5)^2} = \sqrt{50} = 5\sqrt{2}$$

$$BC = \sqrt{5^2} = 5$$

$$AC = \sqrt{0^2 + 5^2} = 5$$

$$P = 10 + 5\sqrt{2} \approx 17.1$$

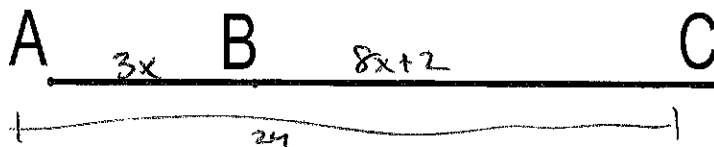
3. M is the midpoint of  $\overline{LN}$ . Find the missing coordinates.

a.  $L(5,-2) M(x,y) N(-3,8)$   $M(1,3)$

b.  $L(8,-1) M(6,0) N(x,y)$   $N(4,1)$

c.  $L(x,y) M(\frac{1}{2}, -4) N(3,2)$

$L(-2,-10)$

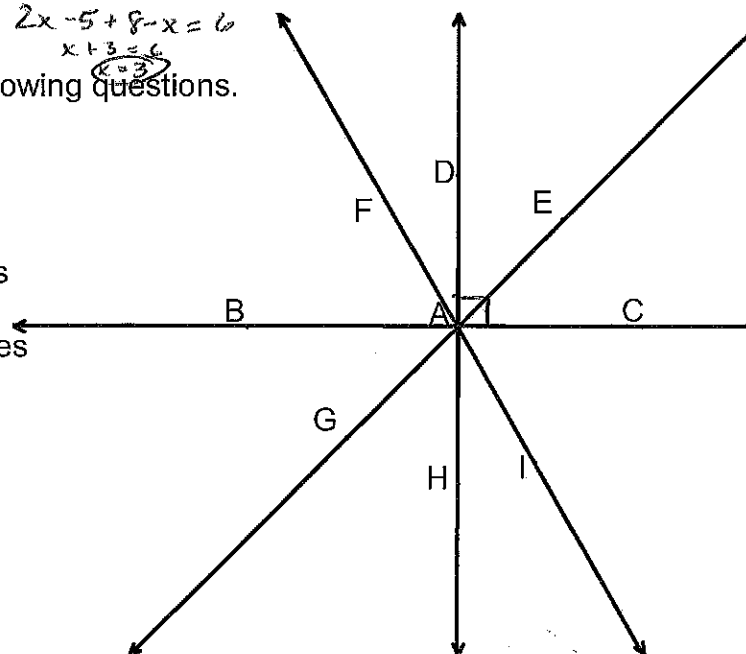


4. Solve for x.

a.  $AB = 3x, BC = 8x + 2, AC = 24$   $3x + 8x + 2 = 24$   
 $11x = 22$   
 $x = 2$

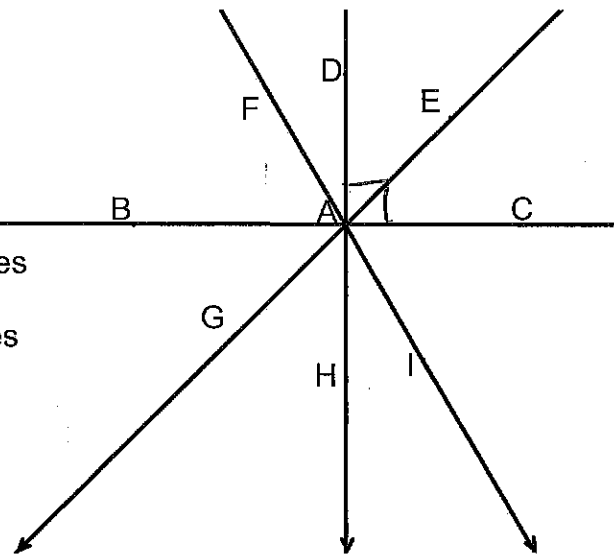
b.  $AB = 2x - 5, BC = 8 - x, AC = 6$   $2x - 5 + 8 - x = 6$   
 $x + 3 = 6$   
 $x = 3$

Use the figure to the right to answer the following questions.  
 $AC \perp DH$

5.  $\angle DAC$   $\angle CAH$  *very* Name 2 right angles6.  $\angle FAD$   $\angle HAI$  *very* Name 2 vertical angles7.  $\angle BAF$   $\angle FAD$  *very* Name 2 adjacent angles8.  $\angle BAF$   $\angle FAC$  *very* Name a linear pair9.  $\angle FAD$   $\angle DAE$  *very* Name 2 acute angles

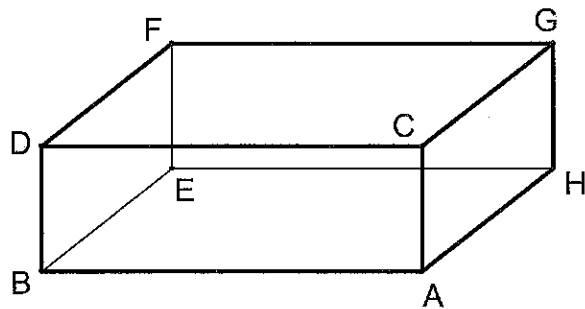
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10.  $\angle BAE$   $\angle FAC$  <sup>very</sup> Name 2 obtuse angles
11.  $\angle DAE + \angle EAC$  <sup>very</sup> Name 2 complementary angles
12.  $\angle GAF + \angle FAE$  <sup>very</sup> Name 2 supplementary angles
13.  $\angle BAC$   $\angle DAH$  <sup>very</sup> Name 2 straight angles
14.  $\overrightarrow{AB}$   $\overrightarrow{AG}$  Name the sides of  $\angle BAG$
15.  $A$  Name the vertex of  $\angle DAE$
16.  $\angle DAE \cong \angle EAC$   $\overrightarrow{AE}$  If  $\overrightarrow{AE}$  bisects  $\angle DAC$ , what conclusion can you make?
17.  $\angle HAG$  Give another name for  $\angle GAH$



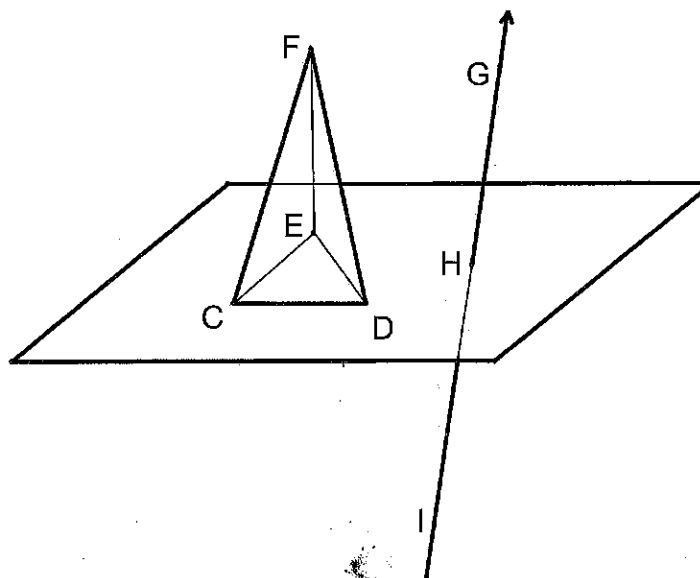
Use the figure to the right to answer the next set of questions.

18.  $DFG$ ,  $CAH$ ,  $ABC$  <sup>plane plane plane very</sup> Name 3 planes
19.  $\overleftrightarrow{DF}$ ,  $\overleftrightarrow{FG}$ ,  $\overleftrightarrow{GC}$  <sup>very</sup> Name 3 lines
20. any 3 is correct <sup>very</sup> Name 3 coplanar points
21.  $A, B, C, D$  <sup>very</sup> Name 4 coplanar points
22.  $A, B, C, H$  <sup>very</sup> Name 4 non-coplanar points
23. No Can you name 3 non-coplanar points?
24.  $C, A$  Name 2 collinear points
25. No Can you name 2 non-collinear points?



Use the figure to the right for the next set of questions.

26. 4 How many planes do you see?
27. <sup>plane FEC plane FED</sup>  
<sup>plane FED plane EDH</sup> Name them



Answer True or False for #s 28-31.

28. False  $\overleftrightarrow{HG}$  is contained by plane DCE

29. True  $\overline{CD}$  is contained by plane DCE

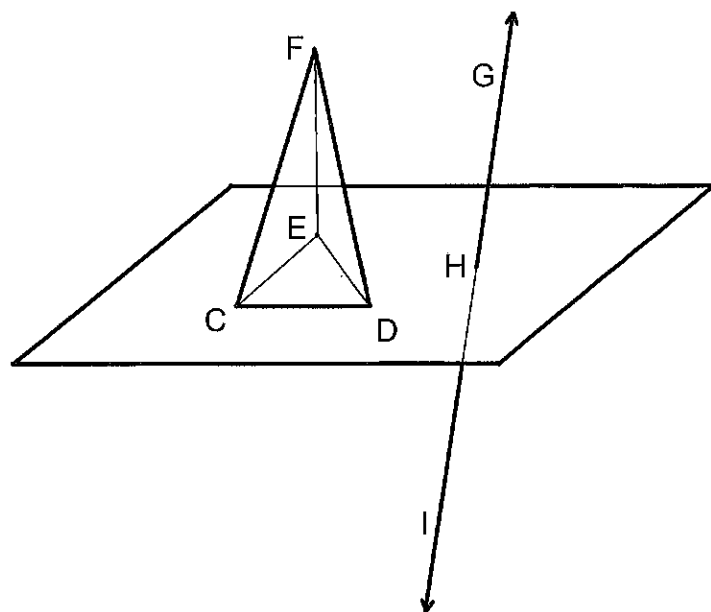
30. False Points C, D, & E are collinear

31. True Points F & H are collinear

32.  $\overleftrightarrow{HG}, \overleftrightarrow{HI}, \overleftrightarrow{GI}, \overleftrightarrow{IH}$  Give another name for  $\overleftrightarrow{GH}$

33. plane CDH Give another name for plane CDE

34. point H Where do plane DCE and  $\overleftrightarrow{GI}$  intersect?



35. An angle is 12 degrees more than its complement. Find the measure of the complement. angle

$$x + y = 90$$

$$x = y + 12$$

$$y + 12 + y = 90$$

$$2y = 78$$

$$y = 39$$

$$39^\circ + 51^\circ$$

36. An angle is 15 degrees less than twice its complement. Find the angles.

$$x + y = 90$$

$$x = 2y - 15$$

$$2y - 15 + y = 90$$

$$3y = 105$$

$$y = 35$$

$$55^\circ, 35^\circ$$

37. Find two supplementary angles if one is four times the other.

$$x + y = 180$$

$$x = 4y$$

$$5y = 180$$

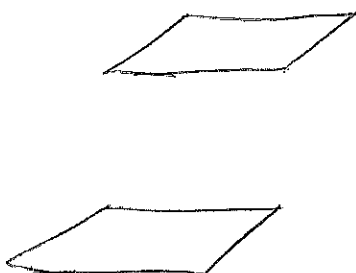
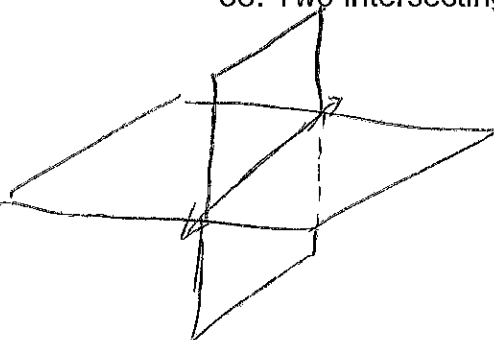
$$y = 36$$

$$36^\circ, 144^\circ$$

Draw the following.

38. Two intersecting planes

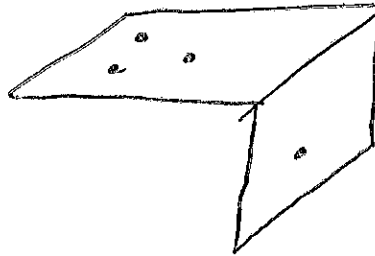
39. Two planes that do not intersect



40. Three non-collinear points



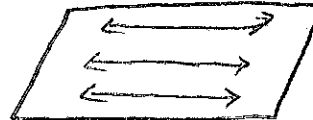
41. Four non-coplanar points



42. Two intersecting lines that are coplanar



43. Three coplanar lines that do not intersect



Use the figure to the right for the next set of questions.

$\overrightarrow{AB} \perp \overrightarrow{BE}$ ,  $\overrightarrow{BF} \perp \overrightarrow{BD}$   
 $\overrightarrow{BC}$  bisects  $\angle DBG$

44.  $m\angle FBE = 4x - 4$   
 $m\angle EBD = 9x + 3$

Find the angles.

$m\angle EBD = 66$   
 $m\angle FBE = 24^\circ$

45.  $m\angle DBC = 4x + 3$   
 $m\angle CBG = 6x - 17$

Find  $m\angle DBG$ .

$86^\circ$

46.  $m\angle DBC = 4x - 1$   
 $m\angle DBG = 10x - 20$   
 Find  $m\angle DBC$ .

$35^\circ$

47.  $m\angle ABD = 10x$   
 $m\angle DBC = 2x$   
 Find  $m\angle ABD$ .

$150^\circ$

48.  $m\angle FBE = 25^\circ$

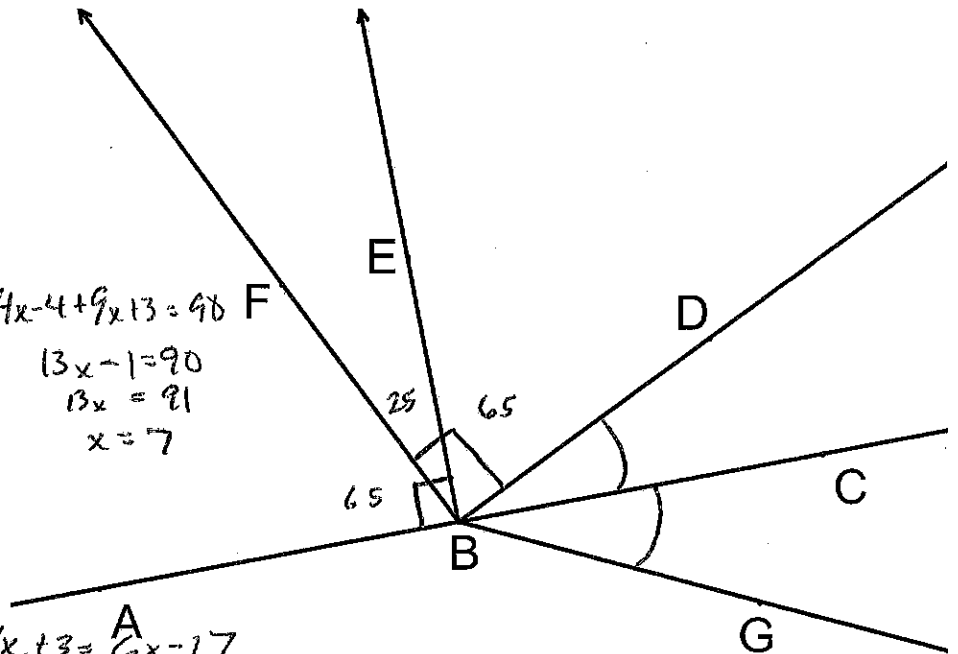
Find:  $m\angle DBE = 65$   $m\angle FBA = 65$   
 $m\angle DBC = 25$   $m\angle CBG = 25$

$$\begin{aligned} 4x - 4 + 9x + 3 &= 90 \\ 13x - 1 &= 90 \\ 13x &= 91 \\ x &= 7 \end{aligned}$$

$$\begin{aligned} 4x + 3 &= 6x - 17 \\ 20 &= 2x \\ 10 &= x \end{aligned}$$

$$\begin{aligned} 2(4x - 1) &= 10x - 20 \\ 8x - 2 &= 10x - 20 \\ 18 &= 2x \\ 9 &= x \end{aligned}$$

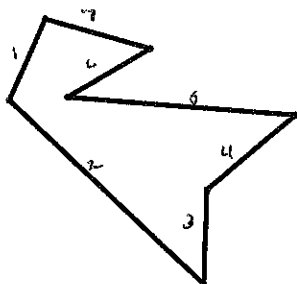
$$\begin{aligned} 12x &= 180 \\ x &= 15 \end{aligned}$$



A. Determine if the following figures are a polygon or not. B. If they are, then are they convex or concave? C. Are they equilateral, equiangular, regular, or neither?

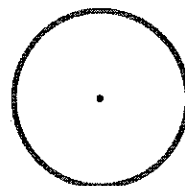
49.

- a. poly  
b. concave  
c. N



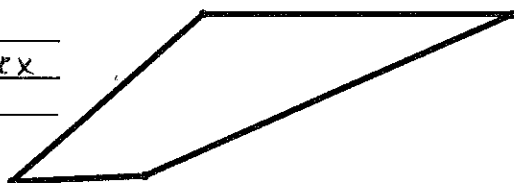
50.

- a. Not poly  
b. \_\_\_\_\_  
c. \_\_\_\_\_



51.

- a. poly  
b. convex  
c. N



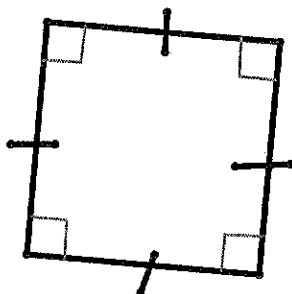
52.

- a. poly  
b. convex  
c. equilateral



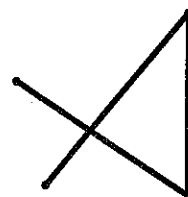
53.

- a. poly  
b. convex  
c. regular



54.

- a. Not poly  
b. \_\_\_\_\_  
c. \_\_\_\_\_

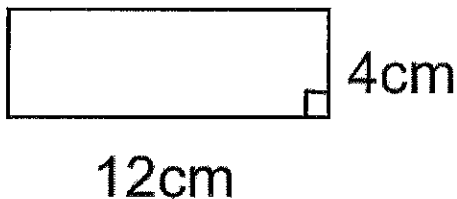


55. What type of polygon are numbers the figures from questions...

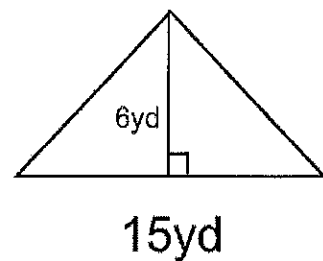
49. heptagon, 51. quadrilateral, 52. dodecagon?

Find the area and/or perimeter of the following shapes.

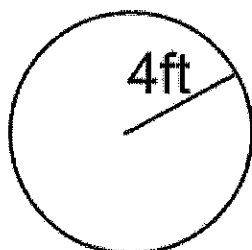
56.  $A = 48\text{cm}^2$   $P = 32\text{cm}$   
(rectangle)  $24 \times 8$



57.  $A = 45\text{yd}^2$   
 $A = \frac{1}{2} 15 \times 6$



58.  $A = 16\pi\text{ft}^2$   $C = 8\pi\text{ft}$   
 $\approx 50.3\text{ft}^2$   $\approx 25.1\text{ft}$



59. The area of a square is  $36\text{cm}^2$ .  
What is  $P = 24\text{cm}$ ?  $s_1 s_2 = 6$

